

Notice of Allowability

Application No.

09/920,180

Examiner

Chun Cao

Applicant(s)

SWOBODA, GARY L.

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to communication filed on 7/24/04.
2. ☒ The allowed claim(s) is/are 2-9 and 11-19 (renumbered as 1-17 respectively).
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☒ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 9/16/04.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

THOMAS LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

EXAMINER'S AMENDMENT

1. An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee.
2. Authorization for this examiner's amendment was given in a telephone interview with William W. Holloway (Reg. No. 26,182) on 9/15/2004.
3. The application has been amended as follows:

Claim 1 (canceled)

Claim 2 (Currently Amended):

Apparatus for measuring the power consumed by a digital signal processor bus during a selected clock cycles, the apparatus comprising:

a unit for counting the logic state transitions on the bus during the selected clock cycles;

a technique for determining the power consumption on the bus for each logic state transitions, wherein the bus power consumption is determined by the number of logic state transitions multiplied by the power consumption for each logic state transitions;

the unit including a plurality of transition detection circuits, each transition detection circuit coupled to one of the bus conductors;

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a storage component, the storage component storing on the output terminal a first signal representative of a logic state of the coupled bus conductor;

a delay component coupled to the output terminal of the storage unit, the output terminal of the delay component storing a delayed signal, the delayed signal being the first signal delayed by a clock cycle; and

a difference component coupled to the output terminal of the storage component and the output terminal of the delay component, the difference component generating a result signal when the first signal and the delayed signal are different.

Claim 10 (canceled)

Claim 11 (Currently Amended):

The method for measuring the power consumed by a bus of a digital signal processor during selected clock cycles, the method comprising:

measuring a number of logic signal transitions of the bus during the selected clock cycles; wherein measuring includes:

comparing the state of a logic signal on each bus conductor during a first clock cycle with the state of the logic signal on the same bus conductor during the next sequential clock cycle;

generating a count signal when the state of a logic signal on a bus conductor is different during a second clock period that the state of the logic signal on the same bus conductor during the first clock period; and

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during the selected clock cycles, determining the total number of count signals;

determining the power consumed for each logic signal transition; and

multiplying the number of logic state transitions during the selected clock cycles by the power consumed by each logic state transition.

4. Pursuant to MPEP 606.01, the title has been changed to read:

**-- APPARATUS FOR DETERMINING POWER CONSUMED BY A BUS
OF A DIGITAL SIGNAL PROCESSOR USING COUNTED NUMBER OF LOGIC
STATE TRANSITIONS ON BUS--**

REASON FOR ALLOWANCE

5. The following is an examiner's statement of reasons for allowance:

The prior art(s) teach(es):

Bowen et al., US patent no. 6,338,025, teaches of determining a power consumption value is formed from a per transition power consumption value multiplied by a number of switching transitions.

However the prior art of record does not teach or suggest, individually or in combination neither a counting unit includes a delay component and a difference component that generating a result signal when the first signal and the delay signal are different.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

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preferably accompany the issue fee. Such submissions should be clearly labeled

"Comments on Statement of Reasons for Allowance."

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II,

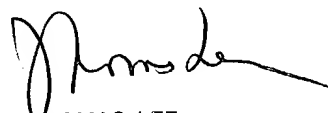
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun Cao at (703) 308-6106 (571-272-3664, effective 10/14/2004). The examiner can normally be reached on Monday-Friday from 7:30 am - 4:00 pm. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor Thomas Lee can be reached at (703) 305-9717 (571-272-3667, effective 10/14/2004). The fax number for this Art Unit is following: Official (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 306-5631 (571-272-2100, effective 10/14/2004).

Chun Cao

Sep. 16, 2004


THOMAS LEE
SUPERVISORY PATENT EXAMINER
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